

Abstract of the Disclosure

A UV light source in which Xenon (Xe) gas is mixed with a substance which, in the temperature range in which 10-valent Xe ions ( $\text{Xe}^{10+}$ ) occur, emits a number of free electrons from a molecule or an atom that at least half the number of electrons which are released from a Xe atom, and which at room temperature is molecular or atomic (for example Ar, Kr, Ne,  $\text{N}_2$  and  $\text{NH}_3$ ). A high voltage is applied in a pulse-like manner to the electrode on the ground side and the electrode on the high voltage side to produce a plasma with a high temperature and from which extreme UV light with a wavelength of 13.5 nm is formed and emitted. The invention can also be used as an extreme UV light source of the capillary, plasma focus, and Z pinch types for example.